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ABSTRACT

A study was conducted to determine whether the reading of short stories about the physically disabled would have any effect on the attitude of physically normal students toward the physically disabled. The sample consisted of eight classes of eighth grade students. Form A of the Attitude Towards Disabled Persons--Revised for Children was used as the pretest, and Form B of the same scale was used as the posttest. Four classes served as the treatment group, with two of them receiving both pretests and posttests and two classes receiving posttests only. Four classes served as the control group, with two receiving both pretests and posttests and two receiving posttests only. Reading achievement measures were given to all students. Students in the treatment group were assigned five short stories about the physically disabled and completed information sheets on each. The findings revealed that (1) the reading of short stories about the physically disabled did not cause the students in the treatment group to become significantly more positive in their attitudes toward such people, (2) reading achievement scores were not a factor in determining whether an attitude change occurred, (3) sex of the student was not a factor in influencing attitudes, and (4) attitudes of the students, regardless of whether they read the stories, changed after a period of eight weeks, becoming more positive in nature. (FL)

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ATTITUDE CHANGE TOWARD THE PHYSICALLY DISABLED THROUGH THE USE OF SHORT STORIES*

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Introduction

The primary purpose of this study was to investigate the effect of reading on the attitudes of eighth grade students. The attitude of the physically nondisabled eighth grader toward the physically disabled was chosen and the question to be answered became: "Does the reading of selected short stories have any effect on the attitude of the physically nondisabled eighth grader toward the physically disabled?"

The potential impact that written words may have on individuals was a concern of the late David Russell, a leader in the field of reading. He suggested that reading could be delineated into four levels of achievement. The reader at the first level associates words with sounds. At the second and third levels, the individual reads for literal meaning and then interprets what has been read. Reading at the fourth level sometimes takes the reader

> beyond thoughtful analysis of critical review to a more stirring experience. ... The impact of the material is such that we receive fresh insight into our own or other's lives. In our reading we are changed a little as persons (Russell, 1969, p. 285).

Related to his fourth level. Russell asked the question: "In a world of television, radio, comic books, parents and teachers, can a book be an experience which changes the nature of reality for the young reader?" (Russell, 1963, p. 267). Today one might ask: Could a series of short stories change negative

attitudes to positive attitudes? (This investigator believes that both questions are valid and need to be further researched).

This study is directed toward Russell's fourth level of reading. More specifically the study sought answers to the following questions and resolve the following null hypotheses:

Question$_1$ Will the students who have read the assigned stories have a more positive attitude toward the physically disabled than students who have not read the stories?

HO$_1$ There will be no significant differences in the post-test means between the groups reading the stories and the groups not reading the stories.

Question$_2$ Will the students' reading achievement levels have any effect on whether an attitude change takes place?

HO$_2$ There will be no significant difference in the post-test means of students with high, average, and low reading achievement levels who read the stories.

Question$_3$ Will girls or boys have a more favorable attitude toward the physically disabled after both girls and boys have read the assigned stories?

HO$_3$ There will be no significant difference in the post-test means between the girls and the boys who have read the assigned stories.

Question$_4$ Will the attitudes of the students who have read the assigned stories be maintained over a period of time?

HO$_4$ There will be no significant difference in the post and the post-post-test means of the students who have read the assigned stories.

Significance of the Problem

In order for an attitude to be measured quantitatively, a portion of the population must be known to have this attitude (Allport, 1967). Billings (1963) examined the attitudes of 54 nondisabled students toward the disabled. The students were selected equally from three schools and from grades one, three, and six. She determined that all the students had unfavorable attitudes toward the disabled but the attitudes of the oldest students were the most negative.

Cohen (1977), in her study of the attitudes of children toward the disabled, found support for the study of Billings (1963). Katz, Katz, Cohen (1976) also discovered a lack of acceptance of disabled children by their nondisabled peers. Cohen, as well as Wright (1973), believed that direct contact between the disabled and nondisabled was of prime importance; she did not believe that contact alone was the answer. She cited as an example the increase of negative attitudes in the area of racial integration. Cohen suggested that there was a void in the schools' curriculum toward the education of the nondisabled about the disabled.

A conscientious attempt by educators to promote positive attitudes toward the disabled is more essential today given that the Education for All Handicapped Children Act of 1975 (PL 94-142) is now public law. As of September 1, 1978 this law mandated that a free public education, in the least restrictive environment, would be provided to all disabled children. Under this law all disabled children would receive an educational program designed

to meet the individual needs of those children.

If a planned curriculum that is designed to educate the nondisabled about the disabled is not feasible than maybe the general availability of reading material, concerning the disabled, possibly housed in the school library, might provide a positive influence on existing attitudes regarding the disabled. If reading materials that will serve the purpose are made available to children, then educators need more information on the effects of reading toward the personal development of the individual. Such information should be helpful for planning and curriculum development.

David Russell believed that if a child could become a better reader and still love reading he might become a better citizen. Russell also believed that a well developed reading habit would strengthen all aspects of the child's personality; it would help him become more aware of his total environment (Russell, 1961). If, as Russell has suggested, reading could influence a child's awareness than possibly having the child read about the disabled would generate a positive influence on his attitude toward the disabled.

Definition of Terms

The major terms used in this study were defined as:

Reading Achievement: The student's reading achievement level was based on his total reading grade level equivalent score as determined by the California Achievement Test, Level 4, Form A. Grade level scores were those scores within the range of 7.7 to 9.9.

Attitude: Attitude refers to the mental state of the individual in relation

to the physically disabled as measured by the Attitude Towards Disabled Persons - Revised for Children scale (ATDC) (Friedman, 1975).

Attitude Change: Attitude change refers to the difference between the pre- and post-test scores as measured by the ATDC.

Disabled and Handicapped: A disabled or handicapped person is one who deviates from the norm in either his mental, physical, or emotional abilities. According to Good (1973, p. 185) the terms disability and handicap are synonymous. For the purpose of simplicity the term disability was used throughout this study to represent the physically disabled person. The term crippled as used in the ATDC also means the physically disabled.

Limitations of the Study

The following factors limit generalizations from the outcomes of this study:

1) The subjects were eighth grade students; therefore, the results of this study cannot be generalized to other grade levels.
2) The students were selected from six kindergarten through eight schools of the Scottsdale School District, and therefore, the results cannot be generalized to other schools outside of the Scottsdale School District.
3) Attitudes toward disabled people were the only attitudes measured. Therefore, the results of this study cannot be generalized to other implications of attitude change.

Assumptions

The following assumptions apply to this study:

1) Students will be honest when answering the questions that accompany each story, specifically in regard to the question: "Have you read the entire story?"
2) A student understood the story if he could state the main point of what the author had said.
3) Both male and female eighth graders will relate to stories with male main characters.
4) The instrument used to measure the attitudes toward the physically disabled was appropriate for use with eighth grade students.

The Influence of Reading on Attitudes

There has been prior research conducted to suggest that reading can bring about changes in attitudes, although it was not until the 1930s that the social effects of reading were given much attention in the research literature. Prior to the 1930s the major concerns in reading were in areas that involved the process of reading and skill development (Smith, 1968).

Rosenblatt (1938) was one of the early researchers to address herself to the issue of the social effects of reading. She accredited many sources of a literary nature as an effective means in the education of young people. Her writing implied that through reading one could experience many occurrences that were unattainable through actual contact. She saw books as a way in

which the young person could vicariously learn of others. She wrote that society tended to develop individuals who were unaware of the needs of others; yet she also believed that the individual who involved himself in literature could become more adjusted to people who differed from the norm.

Waples, Berelson, and Bradshaw (1940) suggested that the readers perceptions of the printed page as a source of authority could affect a change in attitude. They also suggested that as little as 15 minutes of reading could cause an attitude change.

William S. Gray (1947) was another educator who believed that reading could affect the reader. Gray wrote:

> The wide use of reading, both in school and adult life, reflects confidence on the part of educators and the public that reading can and does contribute to personal development and influence social attitudes and behavior (p. 269).

When 680 teachers responded to David Russell that they could remember a book they had read as a child it reaffirmed his belief that a book's influence upon the reader was an important one. He also noted that further research was needed on the subject (Russell, 1949). He believed in the need for research so strongly that he wrote: "...from the research point of view, the effects of reading are an uncharted wasteland in an otherwise well-mapped territory." (Russell, 1958, p. 9).

One form of determing if reading had influenced the individual was the questionnaire. This direct approach of determining if a book could influence

the individual reader was undertaken in studies by Smith, Shirley, and Culp.

Smith (1948) conducted a study involving school children in grades four through eight. The study was done by teachers asking the children if anything they had read had changed their thinking or attitudes in any way. In all, 502 responses were obtained. Of all the changes mentioned, modifications in attitude were most frequently noted. This category represented 60 per cent of the total responses made. Other changes mentioned included concepts, ideas and understanding. Many forms of different materials were reported to have been read. The reading materials ranged from comic books to poetry. Smith mentioned that her study was subject to all the dangers of an investigation involving personal interviews. However, she believed that only in asking individuals would she be able to gather the type of information needed.

Shirley (1969a, 1969b) gave questionnaires to 420 high school students to determine if their attitudes, concepts or behaviors had been changed by anything they had read. He considered the student's age, intelligence, level of vocabulary, level of comprehension, grade level, and the number of selections stated as being influential. These were compared with changes in attitudes, concepts, or behaviors. Materials that had been read voluntarily as well as materials that had been read as a result of a school assignment were considered. The materials were also grouped as fiction versus nonfiction. Of the subjects reporting that their attitudes, concepts, or behaviors had been changed, Shirley found that there was a significant correlation between intelligence, reading proficiency, and the total number of influences reported. There was no signifi-

cant difference between fiction and nonfiction and its influence on the students.

Culp (1975) used questionnaires administered to 158 freshman English students to determine if a particular type of literature could influence the students. He also wanted to determine if there was a relationship between whether a student was influenced by what he read and his intelligence, reading achievement, and background. Eighty per cent of the students reported that attitudes, values, or behaviors had been changed by what they had read. However, attitudes were the most widely mentioned as having been influenced. Of the 158 students, ten were selected on the basis of the amount of influence they had reported from personal reading. Based on the in depth case studies involving interviews, a review of the student's school records and autobiographical data sheets, Culp found that while reading can and does influence the students the books read were of such a variety, no one type of book could account for a change. He also suggested that from the case studies there was no specific relationship between the influence from the books read and the student's academic and nonacademic background.

One of the early research studies in reading and attitude change was conducted by Cherrington and Miller (1933). They used freshman and sophomore college students to determine if attitude could be changed either by the reading of a pamphlet or by listening to a lecture. Both the pamphlet and the lecture dealt with the emotional subject of the abolition of war. The subjects were given a pretest, the treatment and a posttest within a five day time period. A post-posttest was given six months later. Cherrington and Miller found that both the group that had read the pamphlet as well as the

group that had heard the lecture had significant changes in attitude. The attitude changes for the group reading the pamphlet were slightly larger than for the group that heard the lecture. Moreover, the changes in attitude were maintained after a period of six months. There were no significant differences between male and female subjects.

Annis and Meier (1934) using five groups of sophmore college students from three educational psychology classes sought to determine if the reading of planted editorials could influence attitudes. Over a period of two and one half months, one group read 15 newspapers that contained favorable editorials about the Australian prime minister. During the same time period one of the groups read newspapers containing unfavorable editorials on the same subject. Two groups, following the same format, read the last seven of the 15 newspaper articles. The fifth group served as the control group. There was a significant change in attitude toward the prime minister, both favorable and unfavorable, with all four treatment groups. Upon measurement of the attitude after the treatment period, Annis and Meier found that there was no significant difference in the attitudes measured immediately following the conclusion of the treatment and the attitudes when measured four months later. There were no significant differences between male and female subjects.

Osborn (1939) working with junior and senior high school students conducted a study to determine if students could resist propaganda after having studied a unit entitled "Public Opinion and Propaganda." The treatment groups spent six days studying the unit designed to teach them to resist propaganda. Four weeks after the six days of instruction, all groups were given a reading

selection entitled "Why Capital Punishment is Necessary." Both a pre- and posttest attitude survey was given and it was determined that both treatment and control groups had a significant shift in attitude after reading the propaganda. However, the difference between the treatment and control groups was not significant. Two weeks following the posttest a post-posttest was administered and it was determined that the shift in attitudes had been maintained.

Jackson (1944) tried to determine what effect the reading of a short story about a Negro would have on a group of junior high school students' attitudes toward Negroes. She used two groups matched on the basis of sex, intelligence, chronological age, and socio-economic status. Both groups were given an attitude scale as pre- and post-tests. Two separate forms of the attitude scale were used. A story, written by Jackson, was read by the treatment group between the time the pre- and the posttests were given. The pretest, treatment, and posttest were all administered within a one hour time period Jackson found that the treatment group had a statistically significant shift in attitudes. However, the shift was not maintained when a post-posttest was administered two weeks later.

Feltman's (1954) research was primarily concerned with compiling a list of books of fiction that focused on occupations. Included in his research was the secondary purpose of determining if a student's attitude toward occupations could be changed by reading the books that Feltman had selected. All eighth grade students in five schools completed a survey of attitudes toward various occupations. Teachers of the five schools then selected 54

girls who maintained a B+ average and who liked to read. Twenty-two of the girls were given three of the books that Feltman had selected. Twelve girls were allowed to select three books from Feltman's list. The remaining 20 girls read books of their own choosing that were not on the list. At the end of six weeks all of the 54 students were given the same attitude survey. Feltman found that a significant change in attitude did take place for the girls reading the occupational related books.

Fisher (1965, 1968) used 437 fifth graders in eighteen different classrooms to investigate the effect of reading on their attitudes toward American Indians. He divided his subjects into three groups. One group read six stories and had a discussion period following each of the stories. One group read the six stories without any follow up discussion period. One group, the control group, neither read nor discussed any of the six stories. An attitude test was administered to all groups as a pre- and post-test. The posttest, which was administered three weeks following the pretest, also included items designed to determine if the subjects had gained any information on the American Indian from their readings. In his statistical analysis, Fisher looked for attitude change between pre- and post-tests as well as any correlation between reading achievement and attitude change, intelligence and attitude change, and information gain and attitude change. The change in attitudes of the two treatment groups was statistically significant. There was no significant correlation between attitude change and the other three measures.

Tauran (1967) used third grade children to determine if reading favorable and unfavorable stories would influence their attitudes toward Eskimos. Working with 121 students in two schools he used an eight group Solomon Four

Design. The selected stories were prepared in mimeograph form and all required between five and fifteen minutes to read. Four of the stories were favorable in their portrayal of the Eskimos and one story was not. All of the treatment groups read the favorable stories while only half of the treatment groups and one fourth of the control groups were given the unfavorable story. The students read the stories silently during class time. The stories were given to the students during a two week time period. At the end of the two weeks all of the subjects were given a posttest. Tauran found that attitudes were changed by both the favorable and the unfavorable stories. However, the unfavorable story had no effect on those students who had first read the four favorable stories.

Holdsworth (1968) working with 30 junior year nursing students, investigated the effect of reading one book on student nurses' attitudes toward comatose patients. A pretest was given prior to a weekend with the posttest given immediately following the weekend. The students read the book during the time between the pre- and posttests. An attitude change did occur for those who read the entire book, however, it was not satistically significant. Those who did not read the entire book were excluded from the study.

Litcher and Johnson (1969) using a pretest-posttest control group design, randomly selected four classes of second graders. The two treatment groups used a multiethnic second grade reader while the two control groups used the regular second grade reader. Both readers were from the same publisher. Of the total number of students in the study, one half was designated as upper group readers and one half was designated as middle group readers. These

classifications were made by the four teachers participating in the study. After a reading program of four months, Litcher and Johnson found that the two treatment groups had a statistically more favorable attitude toward other ethnic groups than did the two control groups.

The type of involvement needed between the reader and his book in order for an attitude change to take place, was investigated by Harless (1972a, 1972b). Harless based his study on the theory that a reader's attitude would not be changed by simply reading a book unless that reader became involved with the book. Harless suggested that there were three types of involvement: 1) An entertainment cathexis, 2) a proximity cathexis, and 3) an instrumental cathexis. The entertainment cathesix meant that the reader was drawn to the book in an "intellectual, puzzle solving way" (Harless, 1972a, p. 65), and therefore, was not expected to experience an attitude change. The proximity cathexis meant that the reader placed himself in one of the character roles in the story. The same was true of the instrumental cathexis except the reader went one step further and saw the message of the book as a way of solving his own problems. The attitude investigated dealt with the personal characteristics of the main characters in the books read. All subjects were given an attitude instrument as a pretest and then were divided into three groups: two treatment groups and one control group. Two different novels were used, one for each treatment group. The control group read a library pamphlet. The novels were assigned to be read outside of the classroom with the last few pages to be read in the classroom. The pages read in class were read within a given period of time. Immediately following the timed

reading the subjects took a posttest and completed a cathexes instrument. Harless found that involvement or cathexis of either proximity or instrumental was necessary for the attitude change to take place.

Kimmel (1976) in his review of the research suggested that the most noteworthy studies to date were those of Jackson, Feltman, Fisher, and Tauran, all of whom found that selective reading could change attitudes. However, Kimmel's own research failed to support the conclusions reached by the other four researchers. Kimmel, working with 22 fifth grade social studies students, investigated whether a change in attitude toward seven foreign countries would take place when students had access to books, books plus tapes, and picture displays, all of which focused on those seven countries. The study covered a three month time period. Each student was required to complete a questionnaire on each book that he read.

Fabiano (1977) used 104 fourth grade students in her study to determine if attitudes toward older adults could be changed. The students were divided into three groups. One group read five stories silently while listening to them on tape. One story was read each day for five days. Each story was followed by a class discussion. The second group followed the same procedure but did not have a class discussion. The third group served as the control group and neither read nor listened to the stories. At the end of one week a posttest was given. No significant change in attitudes was found.

Attitudes and Attempts to Change Those Attitudes Toward the Physically Disabled

In addition to the research involving reading and attitude change, interest

has also been shown in the attitudes and attempts to change those attitudes toward the physically disabled. Disabled adults often express the idea that the negative attitudes of the nondisabled toward them is more of a limiting factor than the actual disability itself (Fix & Rohrbacker, 1977). In the past few years more interest has been shown in investigating ways in which the attitudes towards the physically disabled can be changed.

Siller, Chipman, Ferguson, and Vann (1967) conducted a study designed to determine if there was any correlation between characteristics of various personalities and the different classifications of disabilities. Subjects were junior high school, high school and college age students. Siller et al. found that scores from the Attitudes Toward Disabled Person, (ATDP); the Feeling Check List, (FCL); and the Social Distance Scale, (SDS) were negatively correlated with such characteristics as anxiety and hostility. Correlated positively with scores from the ATDP, FCL, and SDS were ego strength and nurturance. It was also determined that women's attitudes towards disabilities were more favorable than men's.

Rusalem (1967) based his study on the premise that the attitudes held by the public could deter the education and rehabilitation of the disabled. His 28 subjects were divided into two groups based on scores obtained from an attitude scale. One group was comprised of those subjects who had favorable attitudes toward the disabled while the other group was comprised of those subjects who had negative attitudes toward the disabled. Both groups met for six sessions during which they had personal contact with a deaf and blind person and they received instruction in the manual alphabet and where they

received other information about deaf and blind people. Rusalem found that at the end of six sessions both groups had become more positive in their attitudes toward the disabled. However, the magnitude of the increase of the negative group did not match the magnitude of the increase of the positive group.

Lazar, Gensley, and Orput (1971) worked with 44 gifted eight year olds matched with respect to intelligence and chronological age. The subjects were divided into a treatment group and a control group. The treatment group studied, over a period of four weeks, the lives of creative, disabled Americans such as Edison, Keller, and Roosevelt. Although no emphasis was made on the disabilities of the three, they were discussed. In addition the subjects heard from disabled guest lecturers who informed the children about their respective disabilities. The control group had its usual lessons. Lazar et al. found that at the end of their unit of study those youngsters who were in the treatment group showed a positive increase in attitude toward the disabled.

Rapier, Adelson, Carey, and Corke (1972) using an attitude survey in June, pretested 152 students who were to become fourth, fifth, and sixth grade students beginning the following September. In September at least one orthopedically disabled student was integrated into each classroom of the students participating in the study. During May, approximately nine months later, the students were given the attitude survey as a posttest. Although a positive attitude change took place it was not statistically significant.

Friedman (1975) found in his review of the literature that integration

of disabled children with nondisabled children did not necessarily guarantee a positive change in attitude toward the disabled. Integration could, in fact, serve to increase a negative attitude. Friedman suggested that when disabled children were integrated into a classroom of nondisabled children they were not always allowed to participate in all activities such as recess, physical education classes, or field trips. Such nonparticipation, according to Friedman, served to draw attention to the differences that did exist. Subjects in his study included two sixth grade classes of disabled children from the Human Resources School and Day Camp as well as two fourth grade classes of nondisabled children from two local schools. One of the fourth grade classes and the sixth grade class from the Human Resources School served as a treatment group. The other fourth grade class as well as the sixth grade children who attended the Human Resources Day Camp served as the control group. The treatment groups had opportunities to visit each other at their respective schools. Over a four month period activities were planned to promote positive reactions from the treatment group. The Attitude Towards Disabled Persons - Revised for Children (ATDC) was used as a pre- and post-test. (The ATDC will be discussed in detail in Chapter Three.) Friedman found that the nondisabled children had a statistically significant positive shift in attitude toward the disabled after completion of the program. While the disabled children also had a positive shift in attitude it was not statistically significant. Friedman suggested the latter was probably true because the disabled children began with extremely positive attitudes toward their physical disabilities.

Donaldson and Martinson (1977) used short term workshops for teachers and teacher trainees to try to influence an attitude change toward the disabled. One hundred twenty subjects were divided into four groups. One group received information about the physically disabled through direct contact with a panel composed of three male and three female physically disabled young adults. A nondisabled male and a nondisabled female served as panel moderators. The second group received the same type of information from a video tape of the panel while the third group used audio tapes. The fourth group was the control group. Donaldson and Martinson were interested in which treatment would induce an attitude change and whether there would be an interaction effect between sex and the type of treatment. The treatment groups all made positive gains in attitude. A significant difference did occur among the group that experienced the live presentation and the two groups who used the video and the audio tapes. There was no significant difference between the video and audio or between the audio and control groups. There was no significant interaction between sex and treatment.

Siperstein, Bak, and Gottlieb (1977) investigated the effects of exposure to a disabled and a nondisabled person. Eighty sixth graders from three upper middle class schools were divided into groups of fours. All were exposed to an audio tape of a spelling bee with a good and a poor speller. Prior to the tape the subjects were shown pictures of the two participants. The good speller was an attractive nondisabled person. The poor speller was a Downs Syndrome person. An adjective checklist was used as a pre- and post-test. The pretest was filled out by each subject individually. The

posttest was first filled out individually, then as a group with group consensus, and finally completed again individually. Siperstein et al. found that after exposure to the tape the subjects reacted more positively to the good speller and more negatively toward the poor speller.

The Population and The Sample

The Population

A sample population was selected from the Scottsdale, Arizonia School District. District personnel were interested in the research topic in view of the increased emphasis on the disabled and the Districts aspirations to eliminate negative perceptions towards the disabled.

The ethnic breakdown of the total school district enrollment as of October 1, 1978, was as follows: American Indian (.81%), Asian (.93%), Hispanic (1.94%), Black (.28%), and White (96.02%).

The Sample

Permission was granted by the building principals to do the study and a random selection of eighth grade reading/literature classes was initiated. In order to maintain the groups as nearly homogeneous as possible, only the kindergarten through eighth grade schools were included. Scottsdale School District has one middle school of seventh and eighth graders. This school was not included in the sample since it was not considered representative of the remainder of the District.

Beginning with an alphabetized list of schools, each eighth grade reading/literature class was given a number. A table of random numbers was used and eight classes were selected. Once the eight classes had been

selected a random assignment of the classes to treatment and control groups were completed. Although a random selection of students would have been ideal, it was not possible to select the subjects individually, thus, the random selection of classes. Popham (1967) has suggested that in educational research it is not always possible to have complete random sampling. However, if the researcher makes an attempt to keep from having biased samples then a complete randomization of subjects is not necessary.

Agreement was reached between the classroom teachers and the researcher that the teacher's reading/literature class could be used. Permission was also obtained from the parents for the students to participate in the study.

Instruments

The instruments used in this study were the following: 1) Attitude Toward Disabled Persons - Revised for Children, Form A and Form B; 2) California Achievement Test, Level 4, Form A; and 3) five short stories.

Attitude Towards Disabled Persons - Revised for Children

Friedman (1975) in conducting his study with fourth and sixth grade children believed that Yuker, Block, and Younng's Attitude Towards Disabled Persons Scale (ATDP) (1970) was not appropriate. He found in his pilot study that both vocabulary and the six point rating scale were too difficult for his subjects to read. Friedman made four changes in the ATDP. The first change involved the vocabulary. In rewriting the statements Friedman attempted to maintain the same meaning while using a simpler vocabulary. His second change involved the term physically disabled which he believed was not under-

stood by the students. The term physically disabled became crippled. The third change involved making the statements relate to experiences to which the students would be aware. As Friedman stated:

> For example, a statement on the original form A was "Disabled people should not have to compete for jobs with physically normal people." This statement was modified on the children's version to "Crippled children should not have to compete in school against those children who are not crippled." (Friedman, 1975, p. 19).

The fourth change involved the scale. Friedman believed that a true or false choice would be much simpler for students than the original six point rating scale. Only those statements which were unanimously supported by a panel of judges were used in the survey. Although Friedman suggested that the ATDC was suitable for research purposes, its reliability has not been established. The original ATDP was found to have a reliability coeficient of .83 (split-half) and .71 (test-retest) (Saunders, 1975). Validity of the original ATDP was reported to be relatively high and was based primarily on evidence that supported the construct validity of the instrument (Yuker, Block, & Younng, 1970). Forms A and B can be found in Appendix A.

California Achievement Test, Level 4, Form A, (CAT)

The CAT was administered to students in the Scottsdale School District in January, 1979, one week after the treatment period. Because the CAT is a standardized achievement test, given to all students, during the same time period, and under basically the same conditions, i.e., classroom settings,

the Reading Total scores were obtained to determine if each student in the treatment group was reading at, above, or below grade level at approximately the time of the treatment period. Split-half reliabilities for the total reading subsection of the CAT range from .86 to .96. The validity of the CAT correlates highly with other standardized achievement tests (Buros, 1972).

Those students who were in eighth grade at the time that the test was administered and scored between 7.7 and 9.2 were designated as reading at grade level. Those students with a reading total below 7.7 were designated as reading below grade level and those students with a reading total above 9.2 were designated as reading above grade level. The range of 7.7 to 9.2 was based on the raw scores that fell within the limits of a stanine of 5. A student with a stanine of 5 is considered average and would fall between the 41st and the 60th percentile ranks.

Five Stories

Once the attitude to be tested was decided upon, stories which could be used in an attempt to change those attitudes had to be found. Before selecting the stories the following criteria were established.

1) The difficulty level should not exceed the subject's grade level in school.
2) The main characters in the stories would be males.
3) Stories that included sports, outdoor activities, or careers would be favored.
4) All the stories should be positive in their portrayal of the physically disabled.

5) The characters in the story should be realistic in their actions.

The criteria were developed based on research which suggest that boys like to read about characters of the same sex while girls will read about either sex. Differences between the sexes also occur in their preferences of plot and setting. Boys tend to be more oriented toward sport or outdoor type of stories (Beaver, 1962; Gillespie and Conner, 1975; Mertz, 1975; Smith and Enos, 1961; Stanchfield, 1962).

Five stories which matched the above criteria were selected. These were: "The Flying Genius," "The Runner with the Scarred Legs," "The Yankee Pitcher Who Did the Impossible," "The Man Who Found Humor in Music," and "A Different Kind of Success - Bill Sweezo." All of the stories appeared in They Wouldn't Quit by Ravina Gelfand and Letha Patterson (1962). Permission to reproduce the stories was granted by the Lerner Publication Company. Five stories were chosen as five seemed typical of the number of stories included in a short story literature unit.

The stories followed the established criteria in the following manner:

1) The readability levels of the stories was determined by the Fry Readability Formula. The readability levels of the stories ranged from sixth grade to seventh grade difficulty level. The Fry was chosen because it correlates highly with other well known formulas and because of the ease with which it can be used (Fry, 1968).

2) All of the stories contained male main characters.

3) Of the five stories, two involved sport activities, two involved careers, and one could be classed as an adventure story.

4) All of the stories were positive in their portrayal of the physically disabled.

5) All of the five stories were biographies, thus the characters appeared to be realistic.

The Pilot Study

Background

For this investigation a pilot study was conducted during the week of November 13, 1978. Four classes of eighth graders from two kindergarten through eight schools in the Scottsdale School District were used. Those students, who participated in the pilot study, were not included in the main study.

Purpose of the Pilot Study

In conducting the pilot study answers to the following questions were sought?

1) Are both Form A and Form B of Attitude Towards Disabled Persons - Revised for Children, (ATDC) reliable instruments to use with eighth grade students?

2) Will the students read the five stories assigned to them?

3) Will the students complete an information sheet for each story read?

4) Will the information sheet provide the investigator with an indication of whether the student was able to understand what had been read?

Results of the Pilot Study

As a result of the pilot study the following observations were made:

1) The reliability of both Form A and Form B of ATDC was established. A split-half reliability was done for both forms (Helmstadter, 1964). The reliability coefficient for Form A, corrected for attenuation by Spearman-Brown prophecy, was .49. The reliability coefficient for Form B, corrected for attenuation by Spearman-Brown prophecy formula, was .72. (Split-half reliabilities, which ranged from .62 to .91, were computed for all of the attitude surveys used.)

2) Ninety-six per cent of the students in the treatment group indicated that they had read at least four or more of the assigned stories.

3) If a student had indicated that he had read the entire story he also completed the information sheet. Students who answered 'no' to the question about reading the entire story did not complete the answer sheet.

4) From the information sheet the investigator was able to make a judgment regarding whether the student had understood the story. The judgment was made based on criteria established by a panel composed of two reading/literature teachers, one librarian and this investigator. The criteria established by the panel were as follows:

    A) Disabled people are non different from not-disabled people.

B) Disabled people want to accomplish the same type goals as nondisabled people.

C) Disabled people are able to accomplish their personal goals.

5) Several students were unable to decide on a true or false answer to some of the questions. They either did not make a choice or they circled both answers. If there were four or more items either left blank or given two answers the test was considered not scorable. If there were less than four questions scored in the same manner as above then those questions were not counted in the total score (Yucker, Block & Young, 1970).

The following alteration was made based on the pilot study: New directions were issued to the teachers participating in the main study. These directions asked the teachers to emphasize that each question on the attitude scale had to be answered and only one answer was to be given per question.

Nature of the Treatment

The five stories were assigned to the treatment groups by the classroom teachers. The stories were to be read outside of the classroom and during a period of one week. An information sheet was to be completed for each story read.

Only those students who indicated that they had read at least four of the five stories and who were able to state the main idea of each story read were included in the study. This objective was satisfied by 211 students.

Data Collection

In collecting the data for this study the following procedures were followed:

1) Based on a random selection, the eight classes of eighth graders were designated as follows: four classes were assigned to the treatment group with two classes receiving both pre- and post-tests and two classes receiving posttests only, four classes were assigned to the control group with two of the classes receiving both pre- and post-tests and two of the classes receiving post-tests only.
2) To keep the classroom setting as normal as possible, all administration of the pre- and post-tests as well as the treatment was handled by the classroom teacher (Issac & Michael, 1974).
3) Form A of the Attitude Towards Disabled Persons-Revised for Children (ATDC) was administered to the appropriate groups on Monday, January 8, 1979. Form A served as the pre-test measure.
4) An information sheet, for each story read, was collected from the students in the treatment groups on Friday, January 12, 1979.
5) Form B of the ATDC was administered to all students on Friday, January 12, 1979, the conclusion of the treatment period. Form B served as the posttest.
6) During the week of February 12, 1979, the Reading Total scores from the California Achievement Test, Level 4, Form A, were collected from the schools having the treatment groups.

7) Form A of the ATDC was administered to all students on Monday, March 5, 1979. It served as the post-post test.

Research Design and Data Analyses

Research Design

The design used for this study was a modified Solomon Four-Group Design. This design was chosen because of the nature of the testing instrument. Whenever an attitude is being measured and an attitude scale is used as a pretest there is the chance the pretest may influence the way a subject responds to the posttest. With the Solomon Four-Group Design both the main effects of pretesting and the interaction effects of pretesting and the treatment can be examined. In addition, it is important to know if the change in the posttest scores is due to treatment or due to maturation and history. With this design the effect of maturation and history can be examined (Borg & Gall, 1973; Helmstadter, 1964; Issac & Michaels, 1974; Schneyer, 1969).

The design used is a modification of the original Solomon Four-Group Design as a random selection of intact classes was used rather than a complete randomization of subjects. The following is a schematic representation of the modified Solomon Four-Group Design:

Solomon Four-Group Design

Pretest	Treatment	Posttest
O_1	X	O_2
O_3		O_4
	X	O_5
		O_6

Source: Adapted from Campbell and Stanley, 1967, p. 24.

Manipulation and Analyses of Data

The data collected for this study were analyzed for the following major question: "Does the reading of selected short stories have any effect on the attitude of the physically nondisabled eighth grader toward the physically disabled?" The related hypotheses along with the statistical analyses and results for each hypothesis were as follows:

HO_1 There will be no significant difference in the posttest means between the groups reading the stories and the groups not reading the stories.

The data were analyzed with a two-way analysis of variance to determine if there was a pretest main effect, a treatment main effect, or an interaction effect between the pretest and the treatment. The dependent variable was the posttest score from Form B of the ATDC. Table 4.1 is a schematic representation of a modified Solomon Four-Group Design based on the design as presented in Campbell and Stanley (1967, p. 24). Table 4.2 represents the manner in which the data were analyzed. Table 4.3 presents the means and standard deviations for the attitude survey.

Table 4.1

Modified Solomon Four-Group Design

Pretest	Treatment	Posttest
O_1	X	O_2
O_3		O_4
	X	O_5
		O_6

Source: Campbell and Stanley, 1967, p. 24.

Table 4.2

Analysis of the Data

	Treatment	No Treatment
Pretest	O_2	O_4
No Pretest	O_5	O_6

Source: Campbell and Stanley, 1967, p. 25.

Table 4.3

Means and Standard Deviations

Source	Pretest	Posttest
Treatment With Pretest		
Mean	127.75	129.89
sd	20.20	23.42
Control With Pretest		
Mean	115.70	114.00
sd	25.98	30.87
Treatment No Pretest		
Mean		120.18
sd		22.05
Control No Pretest		
Mean		107.73
sd		26.29

Upon examination of the F-ratios it was determined that both the main effects of pretest and the main effects of treatment were significant. However, the interaction effect of pretest and treatment was not significant. The F-ratios for both main effects and an interaction effect were tested at the .05 level of significance. The data for the analysis are presented in Table 4.4.

Table 4.4

Analysis of Variance of Posttest Scores

Source	df	MS	F
Pretest	1	2808.006	4.176*
Treatment	1	8835.278	13.141**
Interaction	1	129.551	.193

* Significant at the .05 level.
**Significant at the .01 level.

Since the pretest mean of the treatment group was considerably higher than the pretest mean of the control group a t-test was used to determine if there was a significant difference between the two.

Upon examination of the t-value it was determined that there was a significant difference between the pretest mean of the treatment group and the pretest mean of the control group. The t-value was tested at the .05 level of significance. The data are presented in Table 4.5.

Table 4.5

t-test of Pretest Means

Source	Mean	sd	t
Treatment	127.7500	20.201	2.43*
Control	115.7045	25.980	

*Significant at the .05 level.

The significant difference between the pretest means of the treatment and the control groups could account for the significant F statistic of the main effect of pretest as presented in Table 4.4. An analysis of covariance was computed as it appeared that there was not a significant pretest effect. Campbell and Stanley suggest that when "the main and interactive effects of pretesting are negligible," (1967, p.25), the pretest scores can be used as covariates while comparing the posttest scores of the same group.

Upon examination of the F-ratio it was determined that there was no significant difference in the adjusted means between the treatment group and the control group who had been given the pretest. Therefore, the null hypothesis was accepted. The means, standard deviations, and the F-ratio are presented in Table 4.6 The F-ratio was tested at the .05 level of significance.

Table 4.6

Analysis of Covariance of Posttest Means of the Groups Which Had Been Given the Pretest

Source	Mean	sd	F
Treatment Group	129.89	23.42	2.515
Control Group	114.00	30.87	

HO_2 There will be no significant difference in the posttest means of students with high, average, and low reading achievement levels who read the stories. The data collected for both treatment groups were analyzed with analysis

of variance. The dependent variable was the posttest scores from Form B of the ATDC. The students were designated as reading above, at, or below grade level.

Upon examination of the F-ratio for the analysis it was determined that there was no significant difference in the posttest means of students who were reading above grade level, at grade level, or below grade level. The null hypothesis was accepted. The F-ratio was tested at the .05 level of significance. The data are presented in Table 4.7. The means of the reading levels are presented in Table 4.8.

Table 4.7

Analysis of Variance of Posttest Scores

Source	df	MS	F
Treatment by reading Levels	2	161.028	.296

Table 4.8

Means of Reading Levels

Source	N	Means
Above grade level	49	11.2
At grade level	33	8.7
Below grade level	6	7.1

HO_3 There will be no significant difference in the posttest means between the girls and the boys who have read the assigned stories.

The data collected for both treatment groups were analyzed with a t-test. The dependent variable was the posttest scores from the Form B of the ATDC.

Upon examination of the t-value it was determined that there was no significant difference between the girls and the boys who had read the assigned stories. Therefore the null hypothesis was accepted. The t-value was tested at the .05 level of significance. The data are presented in Table 4.9.

Table 4.9

t-test of Posttest Scores

Source	Mean	sd	t
Girls	129.55	20.04	1.79
Boys	120.91	25.14	

HO_4 There will be no significant difference in the post- and the post- posttest means of the students who have read the assigned stories.

The data collected for null hypothesis four were analyzed with a t-test. A t-test was computed to compare the posttest means with the post- posttest means of the treatment groups.

Upon examination of the t-value it was determined that there was a significant difference between the posttest and the post- posttest means. Therefore, the null hypothesis was rejected. The t-value was tested at the .05 level of significance. The data are presented in Table 4.10.

Table 4.10

t-test of the Posttest and the Post-Posttest

Scores of the Treatment Groups

Source	Mean	sd	t
Posttest	125.03	23.14	4.88*
Post-posttest	136.00	25.80	

*Significant at the .001 level.

The original hypothesis did not call for any statistical analysis othe than the comparisons of the posttest means with the post-posttest means of the treatment group. However, upon examination of the means it was determined that all of the post-posttest means were higher, for all groups, than the posttest means. The means and standard deviations are found in Table 4.11.

Table 4.11

Means and Standard Deviations

Source	Posttest	Post-posttest
Treatment With Pretest		
Mean	129.89	140.80
sd	23.42	22.84
Control With Pretest		
Mean	114.00	122.05
sd	30.87	29.28
Treatment No Pretest		
Mean	120.18	131.20
sd	22.05	27.90
Control No Pretest		
Mean	107.73	123.95
sd	26.29	29.91

Summary

The purpose of this study was to answer the following question: "Does the reading of selected short stories have any effect on the attitude of the physically nondisabled eighth grader toward the physically disabled?"

The sample consisted of eight classes of eighth grade students from the Scottsdale School District. The Attitude Towards Disabled Persons - Revised for Children (ATDC) scale (Friedman, 1975) was used to measure the attitudes of the eighth graders toward the physically disabled. The treatment groups were assigned to read five short stories about the physically disabled. Analysis of variance, analysis of covariance, and t-tests were used to analyze the data. All data were tested at the .05 level of significance.

The findings of the study were:

1) There was no significant difference between the post-test means of the treatment group and the control group. Therefore, the null hypothesis was accepted.
2) There was no significant difference in the posttest means among the students with high, average, and low reading levels. Therefore, the null hypothesis was accepted.
3) There was no significant difference between the post-test means of the girls and the boys who had read the stories. Therefore, the null hypothesis was accepted.
4) There was a significant difference between the post-test and the post-posttest means of the treatment groups. The null hypothesis was rejected. Further analysis indicated the post-posttest means for both treatment and control groups had increased and therefore there was no significant difference between the two groups.

Conclusions

The conclusions of this study are as follows:

1) Reading five short stories about the physically disabled does not cause eighth graders to become significantly more positive in their attitudes toward the physically disabled.
2) Reading achievement levels of the students are not a determining factor regarding whether an attitude change takes place as a result of reading stories.
3) Sex of the subjects was not a contributing factor in influencing attitudes toward the physically disabled.
4) Attitudes of the eighth grade students in this study toward the physically disabled, regardless of whether they read the stories, changes after a period of eight weeks. The changes are more positive in nature. Therefore, because the attitudes of all students became more positive, the change could not be attributed to the treatment.

Discussion

It is hoped that the findings of this research will be a useful addition to the literature as well as a catalyst for additional and more broadly based empirical investigations on the subject. Although the results did not support Russell's convictions that an individual can be changed in some manner by what he reads (Russell, 1969), some questions as to the significant results reported from previous studies were raised.

Popham (1967) and others support the use of intact classes in educational research. In reviewing the nine studies that were reported in Chapter II as having had significant results, it was discovered that six of the studies had

used intact classes and one study had teachers select the students who were to participate. This present study also used intact classes. While every effort was made to have a representative sample, scores on the ATDC pretest indicate that an aberrant class existed within the total classes that were selected. This researcher believes that the existence of the aberrant class affected the results of this study. Because an anomoly can happen in the selection of intact classes this researcher wonders whether other studies, using intact classes, may have included samples that were not truly representative of the population. If indeed this were the case then the question arises as to whether or not the results of the studies may have been influenced by the samples selected.

While formulating the hypotheses for this study, this investigator wondered if stories written at a more difficult level than the student's reading achievement could cause a change in attitude. In testing this hypothesis, it was determined that there was no difference among the attitudes toward the physically disabled of the students with high, average, or low reading achievement levels. However, the reading levels of the total population of Scottsdale School District eighth graders from which this sample was drawn, are above the national norm expected for eighth graders. Thus, very few eighth grade students were found to be reading below grade level. This was determined by the reading total scores taken from the California Achievement Tests, which were administered in January, 1979. The national norm for an eighth grader reading at grade level at the time the test was administered was 8.5. The Scottsdale School District average for eighth grade, based on the

tests administered in January, 1979, was 9.8 (Information received from the Department of Research and Compliance Services, Scottsdale School District, February, 1979). Fisher (1965, 1968) also found that reading achievement did not affect an attitude change, however, it is not known where his sample of subjects fell in relation to expected reading achievement for that grade level. Thus, this researcher believes that although the null hypothesis was accepted, the characteristics of this sample restrict generalizations to other eighth grade students falling outside the upper and lower limits of the performance bands noted.

The stories selected for this study were directed to the male population. This was done since the literature suggested that boys tend only to relate to stories that contain male main characters while girls will relate to stories with main characters of either sex. Even though the stories were selected for the boys there was no significant difference between the girls and the boys after they had read the stories. Since all the students in the treatment group were not pretested it is not known whether a difference existed between the sexes prior to the reading of the stories.

Of the studies on reading and attitude change that were reviewed, only four of the studies gave post-posttests to determine if attitudes, once they had been changed, would be maintained. Of the four, Cherrington and Miller (1933), Annis and Meier (1934), and Osborn (1939) found that after six months, four months, and two weeks respectively, the attitudes were the same as they were immediately following the treatment period. In the studies of Cherrington and Miller (1933) and Osborn (1939) the issues around which the attitudes were

based were very emotional in nature. These issues were war and capital punishment. In the Annis and Meier (1934) study the treatment extended over a period of two and one half months. Jackson (1944), who also gave a post-posttest, found that her subjects did not maintain an attitude change two weeks after the posttest. Jackson gave her pretest, treatment, and post-test all within a one hour time period. In testing the hypothesis concerning whether an attitude change would be maintained this researcher found that there was a significant difference between the posttest and the post-posttest scores of the treatment group. However, further analysis revealed that there was no significant difference between the treatment and the control groups. This suggests that some factor or factors other than the treatment alone might account for the more positive attitudes revealed by the post-posttests.

Further interpretation of the results can be viewed in terms of the literature and norms previously established on the original attitude survey. Friedman (1975) who revised the original ATDP for children, suggests that students whose attitudes are more positive in nature do not show as much increase in mean scores after treatment as do the students with attitudes that are less positive. When the post-posttest scores from the ATDC of the Scottsdale eighth graders were compared to the norms established by Yuker, Block, and Younng (1970), for the ATDP, it was determined that the eighth grade students scored higher. The scores could range from 0 to 180 with a higher score indicating a more positive attitude. Furthermore, the pretest attitudes of one treatment group as well as the posttest attitudes of both treatment groups were higher than the norms established by Yuker et al. and

were more positive in nature. Thus, the relatively high scores of the students in this study may be another contributing factor as to why there was no significant treatment effect.

While the purposes of the original research design have been investigated and attempts have been made to derive statistically valid conclusions, the most important findings of this study actually point out the need for and the possible direction of additional research in the area of attitudes and/or attitude change.

Recommendations

The results of this study indicated the following recommendations for further research:

1) A different experimental design should be used to allow for post-testing at different periods of time while minimizing the number of times a student is exposed to a test. Campbell and Stanley (1967) suggest that posttesting at different intervals not only provides information about the effect of the treatment but it also provides information as to whether the effect is maintained.
2) The study should be replicated with the sample randomly drawn from a larger population. A random selection of students would help to insure that the students were representative of the total population and would preclude the use of intact classes. Also, a randomly selected sample from several school districts, would allow for greater diversity in reading levels, ethnic background and income levels. These variables could then become factors to be considered in generating

future hypotheses to be tested. Fisher (1968) examined both race and socio-economic levels in his study. However, he was not able to analyze his data with respect to these two variables because of lack of distinction between the two. Richardson, Goodman, Hastorf, and Dornbush (1963) in a study of attitudes toward the disabled found that cultural influences were evident in the attitudes of the young. Because of the small percentage of non-whites in the Scottsdale School District, this study could not examine racial differences in attitudes toward the physically disabled.

3) It is suggested that a wider selection of stories with both male and female main characters be made available to the students. With a wider selection one could try to determine if boys as well as girls would continue to experience a positive shift in attitudes toward the physically disabled after reading stories that were not predominately geared to males.

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